

A NOTE ON THE REARING OF *AUSTROARGIOLESTES ISABELLAE* (THEISCHINGER & O'FARRELL) (ODONATA: MEGAPODAGRIONIDAE)

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Abstract

Rearing of *Austroargiolestes isabellae* from egg to adult revealed that 21 days were required for egg development at room temperature and approximately 37 weeks for larval development with 8-9 instars.

Introduction

Theischinger and O'Farrell (1986) described *Austroargiolestes isabellae*, a medium-sized damselfly from the Blue Mountains and the Sydney region in New South Wales. Nothing has been published on its life history and rearing from egg to adult has provided the information presented below.

Life history

Eggs of *A. isabellae* were collected on 12.xi.1989 after a female was observed ovipositing into the soggy bark of a fallen tree limb floating in the upper reaches of Waterfall Ck, Royal National Park, N.S.W. (34°08'S 151°00'E). The female, unaccompanied by the male, laid her eggs near water level at 1515 h. The eggs were returned from the field, placed in an 80 mm Petri dish filled with creek water and maintained at room temperature with the aim of rearing two larvae to adults in order to obtain some details on the early stages.

Embryonic development was completed 21 days later, when many second-instar larvae were observed crawling about the bottom of the dish. The prolarvae were not seen. Two larvae were removed from the dish using a small brush and placed in individual 80 mm Petri dishes filled with tap water. The number and dates of subsequent larval moults were recorded daily. The other larvae were returned to Waterfall Ck. Early instars were fed each day with a dropper of pond water containing Protozoa and later instars were fed weekly on *Daphnia* and small mosquito larvae. After about ten weeks, when the wing buds began to appear, the larvae were transferred to small 10 cm plastic flower pots with enlarged drainage holes and covered with fine netting.

A substrate of rock and gravel and an emergence stick were provided. The pots were placed in a tray of water (39 x 35 x 6 cm) aerated by two large air-stones placed in the middle to circulate water and provide a well oxygenated environment.

The two larvae underwent 7 and 8 moults respectively (Table 1) over a period of approximately 37 weeks. The final instar was the longest occupying about half the period of larval development. Larva one emerged on 19.viii.1990 at 0800 h and the other on 23.viii.1990 at 0630 h. Emergence took place on the

Table 1. Records of egg hatches, larval moults, emergence of adults and duration of all instars in *Austroargiolestes isabellae*

Larva No.	Egg hatched	Moult 2	Moult 3	Moult 4	Moult 5	Moult 6	Moult 7	Moult 8	Adult Emergence	Total larval period
ONE	3.xii.89	17.xii.89	31.xii.89	7.i.90	28.i.90	11.ii.90	25.ii.90	26.iii.90	19.viii.90	
Duration of instars (days)		14	14	7	21	14	14	29	146	259
TWO	3.xii.89	17.xii.89	31.xii.89	17.i.90	15.ii.90	24.ii.90	28.iv.90	-	23.viii.90	
Duration of instars (days)		14	14	17	29	9	63	-	117	263

emergence stick with both larvae selecting a position about 7 cm above the water level. Examination of the teneral adults showed them both to be females.

September 10 is the earliest I have observed adults, with an ovipositing female and four males perched in waterside vegetation being sighted at Waterfall Ck.

Both larval skins and one of the reared adults have been donated to the Australian National Insect Collection, C.S.I.R.O., Canberra. The remaining adult was released in its native habitat.

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Reference

THEISCHINGER, G and O'FARRELL, A.F. 1986 The genus *Austroargiolestes* Kennedy (Zygoptera: Megapodagrionidae). *Odonatologica* 15: 387-428.